

REMARKS

Claims 1, 4-5, 8-9 and 12 are all the claims pending in the application. Claims 1, 5 and 9 have been amended.

I. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 4-5, 8-9 and 12 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Towery et al., (U.S. 5,574,832), in view of Nishida, (U.S. 6,909,522), and Cheung et al., (U.S. 5,973,803). Applicant respectfully traverses the rejection.

Claim 5 recites, *inter alia*,

a first processor for storing RGB color image data for a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the RGB color image data for the image to be printed;

a second processor for selecting not the entirety but a part of the stored RGB color image data that represent a RGB color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

a third processor for performing a color conversion process on the selected RGB color image data and not on the entirety of the RGB color image data and a halftone process that uses a threshold pattern having a printing resolution on the converted RGB color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer

In the Office Action, the Examiner asserted that Towery teaches or suggests the first through fourth processors of the claim. However, Applicant respectfully submits that Towery

fails to teach or suggest at least the requirements of the first, second, and third processors of the claim.

In the Office Action, the Examiner asserted that the requirements of the first processor are taught by Towery in column 4, rows 34-38, and column 4, rows 18-28. In particular, the Examiner asserted that the swath memory 41 stores a part of color image data. However, Applicant respectfully submits that Towery fails to teach or suggest storing RGB color image data in the swath memory 41. This is clear in view of the following recitations of Towery in column 4, row 63 through column 5, row 3:

For the particular example of a binary printing, the data for each pixel comprises a binary bit that fines whether or not a dot is to be printed at that pixel. For ease of reference, in this disclosure a pixel bit contains a 1 if a dot is to be printed on the corresponding pixel, but it should be appreciated that a 0 can be utilized to indicate that a dot will be printed, depending upon implementation

Moreover, Towery recites, in column 4, rows 34-38:

A print controller 31 transfers portions of the raster data from the bit-map memory 42a to a swath memory 41 and provides swath data to a printhead driver controller 38 which controls printhead drivers 45 that drive the ink firing elements of the printhead cartridges C1, C2, C3, C4.

These descriptions clearly indicate that the data stored in the swath memory 41 are not RGB Color image data. Rather, they are the dot data representing on/off state of each dot to be printed at each pixel. Accordingly, Applicant respectfully submits that Towery fails to teach or suggest the first processor for storing RGB color image data for a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub

scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the RGB color image data for the image to be printed.

Applicant further respectfully submits that Towery fails to teach or suggest the second processor and the third processor. In particular, the claim requires the second processor select a part of the stored RGB color image data and the third processor perform a color conversion process on the selected RGB color image data. However, Towery clearly cannot teach or suggest these requirements of the claim because the swath memory 41 of Towery stores the dot data but not RGB color image data. As such, Applicant respectfully submits that Towery fails to teach or suggest this limitation of the claim.

Further, Applicant respectfully submits that Towery fails to teach or suggest “a halftone process that uses a threshold pattern having a printing resolution on the converted RGB color image data”. The Examiner asserted that Towery describes the dithering as a halftone process in column 5, rows 43-64. However, Applicant respectfully submits this section of Towery only indicates that dithering is performed to produce dot data in general. Towery does not indicate that the dithering is performed on the data stored in the swath memory 41. On the contrary, the descriptions in column 4, row 63 through column 5, row 3, and column 4, rows 34-38 discussed above clearly indicate that the swath memory 41 stores the dot data and that the dithering would not be performed on the data stored in the swath memory 41. As such, Applicant respectfully submits that Towery fails to teach or suggest this limitation of the claim.

Having pointed the technical deficiencies in Towery vis-à-vis independent claim 5, Applicant respectfully submits that it is not difficult to see that Nishida and Cheung does not compensate for the deficiencies of Towery. Furthermore, even the combined teachings of these

references, taken as a whole for what they would have meant as a whole to an artisan of ordinary skill, cannot be said to meet the express requirements of claim 5.

Accordingly, Applicant respectfully submits that claim 5 would not have been obvious under 35 U.S.C. § 103(a) over Towery in view of Nishida and Cheung, because the references, alone or in combination, do not teach or suggest all of the features and limitations of the claim. Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of claim 5 and claim 8 at least by virtue of its dependency from claim 5.

Applicant further respectfully submits independent claims 1 and 9 are patentable over the cited combination for similar reasons. Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of claims 1 and 9 and claims 4 and 12 at least by virtue of their dependency from claims 1 and 9.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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